

**IN THE CLAIMS**

Claim 1. (Currently Amended) A network element, comprising:

a first processor supporting a first processing environment;  
an intelligent interface between the first processing environment and a management device external to the network element, said intelligent interface comprising a second processor supporting a second processing environment independent of the first processing environment, the second processor being able to boot independent of a boot process of the first processing environment, an internal interface enabling the first processing environment to be accessed from the second processing environment, and an external interface connected to the second processing environment to enable the second processing environment to be accessed from the management device external to the network element.

Claim 2. (Original) The network element of claim 1, wherein the intelligent interface further comprises a memory.

Claim 3. (Original) The network element of claim 1, wherein the first processing environment comprises a first kernel, and wherein the second processing environment comprises a second kernel.

Claim 4. (Currently Amended) The network element of claim 1, wherein the second processor further comprises control logic ~~configured to enable~~ enabling a new software image to be loaded onto the intelligent interface, said new software image to be used by the second processing environment to configure the first processing environment.

Claim 5. (Original) The network element of claim 4, wherein the intelligent interface comprises a memory, and wherein the new software image is stored in said memory.

Claim 6. (Currently Amended) The network element of claim 1, wherein the second processor comprises control logic ~~configured to enable~~ enabling information related to an operational condition of the first processor to be collected over the internal interface and transmitted over the external interface.

Claim 7. (Original) The network element of claim 6, wherein the operational condition comprises at least one of Management Information Base values, logging information, and operational parameters.

Claim 8. (Original) The network element of claim 6, wherein the second processor comprises control logic configured to enable diagnostic checks to be run on the first processing environment.

Claim 9. (Currently Amended) The network element of claim 6, wherein the second processor comprises control logic ~~configured to enable~~ enabling modifications to be made to the first processing environment over the internal interface.

Claim 10. (Currently Amended) The network element of claim 1, wherein the external interface ~~is configured to operate~~ operates utilizing at least one of the Universal Serial Bus (USB) standards.

Claim 11. (Currently Amended) An intelligent management interface for a network element, the network element including at least one network element processor controlling operation of the network element in normal operation, comprising:

at least one intelligent management interface processor supporting an independent operating environment for the intelligent management interface which is separate from the operating environment supported by the at least one network element processor and able to boot separate from a boot process of the at least one network element processor of the network element, the independent operating environment enabling ~~configured to enable~~ the intelligent management interface to be active during the a boot process of the at least one network element processor of the network element; and

intelligence ~~configured to enable~~ enabling the intelligent management interface to take actions on the network element to control the boot process of the at least one network element processor.

Claim 12. (Currently Amended) The intelligent management interface of claim 11, wherein the intelligence is ~~configured to perform~~ performs diagnostic checks on the network element.

Claim 13. (Currently Amended) The intelligent management interface of claim 11, wherein the intelligence is ~~configured to upload~~ uploads files to the network element.

Claim 14. (Currently Amended) The intelligent management interface of claim 11, wherein the intelligence is ~~configured to cause~~ causes a new software image to be stored on the intelligent management interface, and ~~to cause~~ causes the network element to be restarted from the new software image.

Claim 15. (Currently Amended) The intelligent management interface of claim 11, wherein the intelligence is ~~configured to control~~ controls the network element before, during, and after a network element boot process.

Claim 16. (Currently Amended) The intelligent management interface of claim 11, wherein the intelligence is ~~configured to enable~~ causes at least one of files and Management Information Base (MIB) information to be transmitted from the intelligent management interface to enable a network manager to manage the network element during at least one of a network element boot process and in a network element run-time environment.

Claim 17. (Currently Amended) The intelligent management interface of claim 11, wherein the intelligence is ~~configured to implement~~ implements a Universal Serial Bus (USB) stack to enable the intelligent management interface to communicate over ~~the~~ an exterior interface utilizing at least one of the USB standards.

Claim 18. (Original) A method of managing a network element, comprising:  
accessing a USB port on a network element; and  
transferring management information over the USB port.

Claim 19. (Original) The method of claim 18, wherein the management information comprises a software image to be loaded onto the network element.

Claim 20. (Original) The method of claim 18, wherein the management information comprises Management Information Base (MIB) values indicative of at least one of performance by the network element and the state of operation of the network element.

Claim 21. (Currently Amended) The intelligent management interface method of claim 14, wherein the new software image is downloaded from a centralized location accessible to multiple network elements, and wherein the new software image ~~is configured to upgrade the existing~~ upgrades a previous software image with new software containing new features.

Claim 22. (Currently Amended) The intelligent management interface method of claim 14, wherein the new software image is downloaded from a centralized location accessible to multiple network elements, and wherein the new software image ~~is configured to upgrade the existing~~ upgrades a previous software image with a corrected version of the existing software.